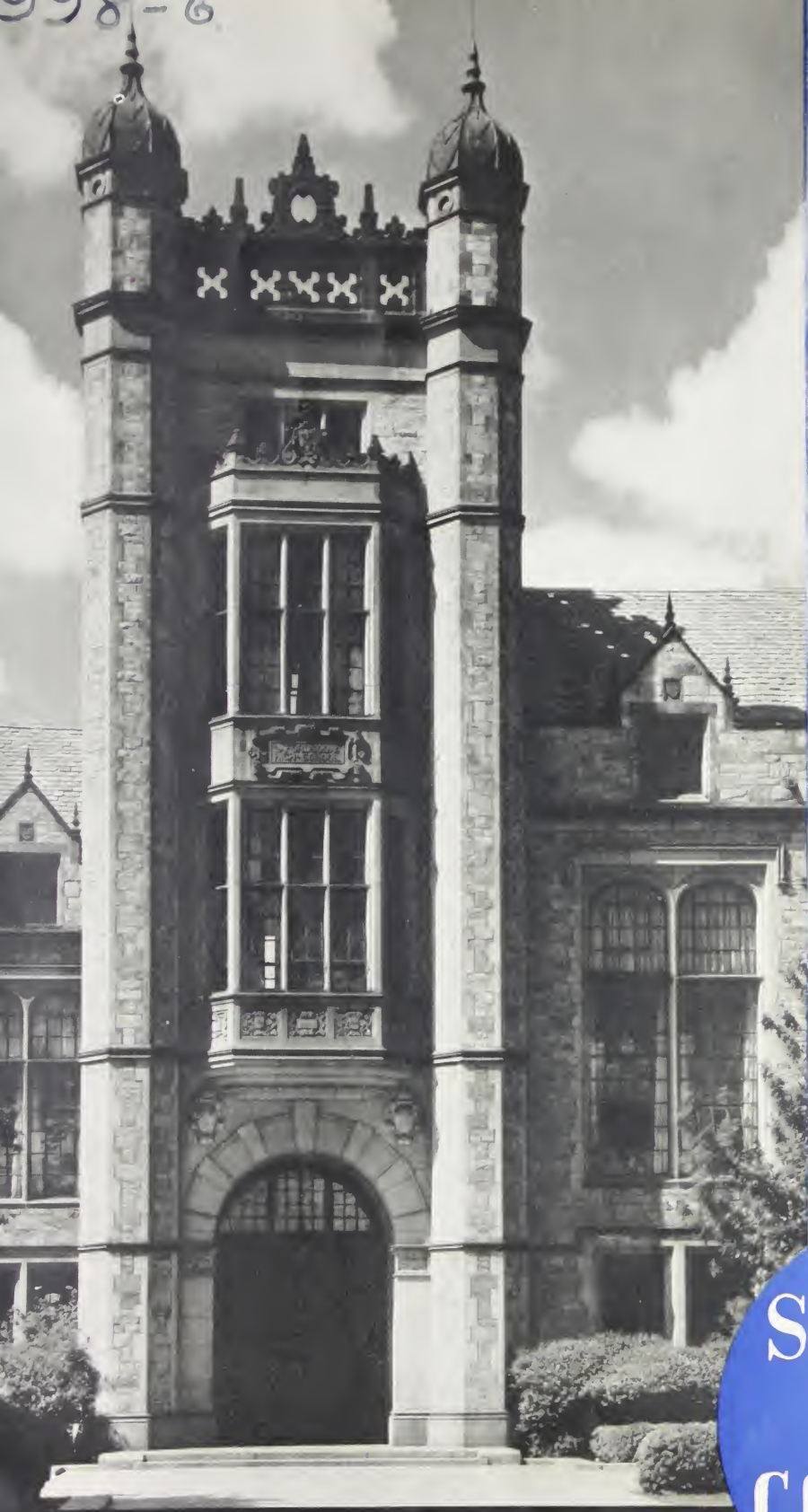


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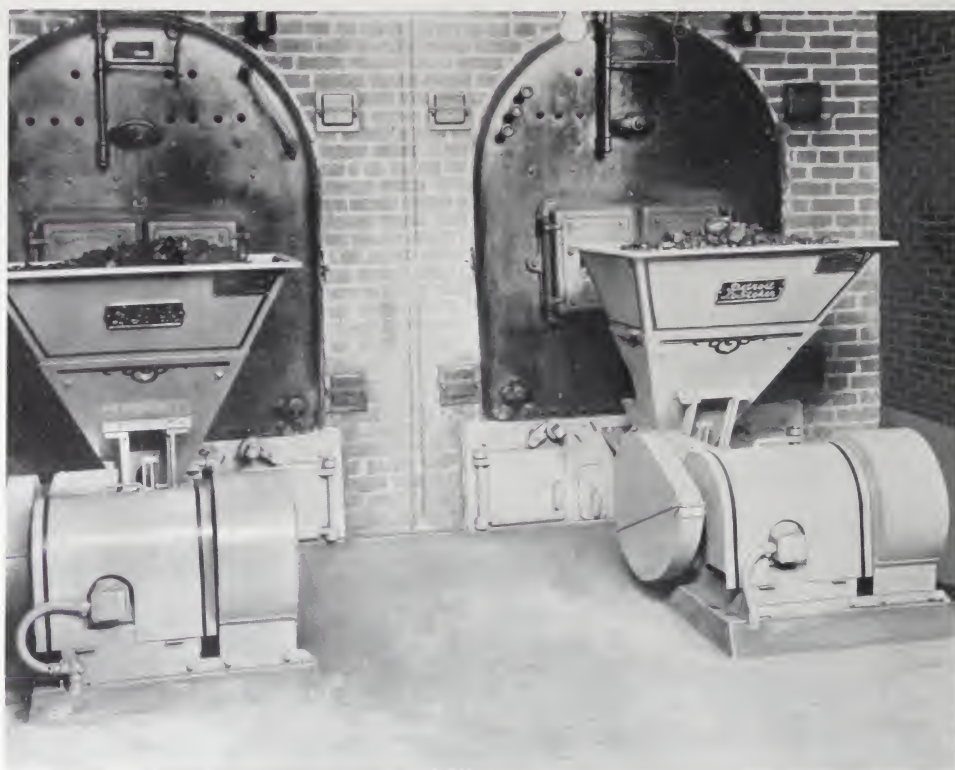


SCHOOLS  
and  
COLLEGES

*Economical* HEAT *Automatic*

FRANKLIN INSTITUTE  
PHILADELPHIA





Boyd School, Monroe, Michigan

## The Most Economical Method of Heating Schools and Colleges

- Coal . . . the basic fuel . . . as burned with Detroit Stokers is the most economical and dependable method of producing heat. Experience has proven that Detroit Stokers are unsurpassed in low operating cost . . . in their ability to secure high efficiency from boilers of all types and sizes. Economies obtainable with medium sized boilers are now comparable with those in larger plants.

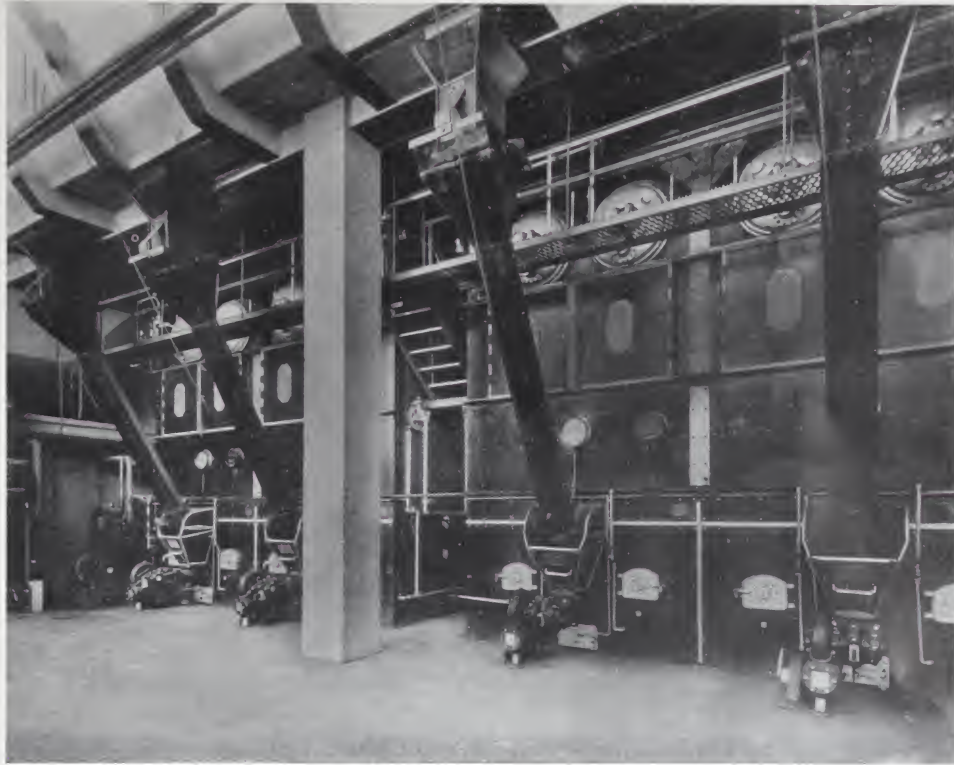
- Savings are surprisingly high where

Detroit Stokers have replaced other firing methods. . . . No special coal is required and often less expensive grades of coal can be used.

- Detroit Stokers are automatically controlled and respond readily to changes in the steam required. Uniform boiler pressure is maintained.

- Frequently the fireman has considerable time to attend to other duties around the building, thus saving labor.





Fordson High School, Dearborn, Michigan

## **Detroit Stokers**

### **Dependable and Convenient**

#### ● DESIGN

Detroit Stokers are of the dependable plunger feed, side cleaning, mechanically driven type. Simple in design, but heavily built for years of continual hard service.

#### ● CONSTRUCTION

Detroit Stokers are completely assembled and carefully inspected at our own Works prior to shipment. This insures prompt installation under the supervision of one of our experienced Erection Superintendents.

#### ● APPLICATION

Each proposed installation is carefully studied from an engineering standpoint. The proper size and type of Detroit Stoker is recommended to best suit the particular plant. Easily applied to boilers already installed.

#### ● PERFORMANCE

Detroit Stokers are economical because the fuel is gradually fed into the furnace beneath the incandescent zone, and is completely burned. Objectionable smoke is eliminated.





Cherry School, Toledo, Ohio

**Detroit Stokers  
Reduced Fuel Costs 53%  
at Cherry School, Toledo, Ohio**



Feilbach School, Toledo, Ohio, Adjacent to the Cherry School  
Samuel R. Lewis, Consulting Engineer, Chicago

*and also—*  
**Saved Large Investment  
at new Feilbach School, Toledo, Ohio**

● Before Detroit Stokers were installed, Cherry School, Toledo, Ohio, had an annual fuel cost of \$1.40 per 1000 cubic feet of space heated. Detroit Stokers with the original boilers, reduced this to \$0.649—a 53% reduction. Also the capital investment in a heating plant in the new Feilbach School was saved. The

new Feilbach School requires about 82% as much steam as the Cherry School and is adjacent to it on the same plot of ground. Detroit Stokers increased the capacity of the Cherry School's boilers sufficiently to take care of the heating requirements of the new Feilbach School.



## **Otisville (N. Y.) High School Cuts Coal Bill 27% with Detroit Stoker**

● Board of Education reports a fuel cost of \$1599.69 for the heating season (1933-34) prior to the installation of a Detroit LoStoker. After installation the coal bill (1934-35) was only \$1151.89—a saving of 27%. For the second season (1935-36) of LoStoker operation a further reduction to \$1096.54 was reported.



Otisville High School, Otisville, N. Y.



## Detroit Stokers Helped Save \$73,000 in Virginia State Institutions

● University of Virginia, Virginia Polytechnic Institute, College of William and Mary, and three State Teachers Colleges are among the eleven State Institutional Plants that were modernized by Mr. Adolph Wagner (Supervisor of State Power Plants) when he reported an annual saving of \$73,000 in the State's coal bill. Detroit Stokers installed in these Educational Institutions played an important part in effecting this saving.

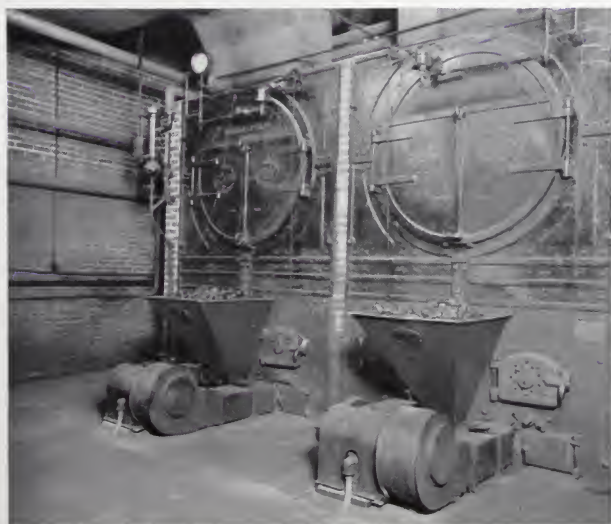
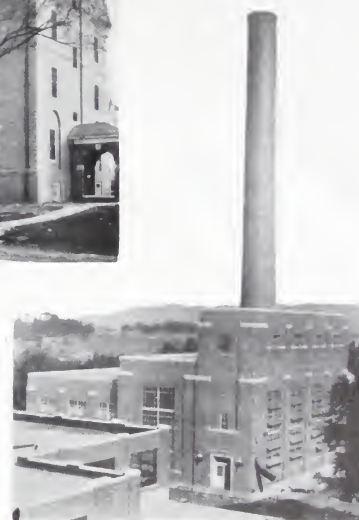


University of Virginia, Charlottesville, Va.



(Above)  
College of William and Mary, Williamsburg, Va.

(At Right)  
Power Plant—Virginia Polytechnic Institute,  
Blacksburg, Va.



Detroit LoStokers at St. Benedict's School, Highland Park, Mich.  
Donaldson & Meier, Architects, Detroit  
McColl, Snyder & McLean, Consulting Engineers, Detroit

## \$500 a year Fuel Saving, more uniform heating

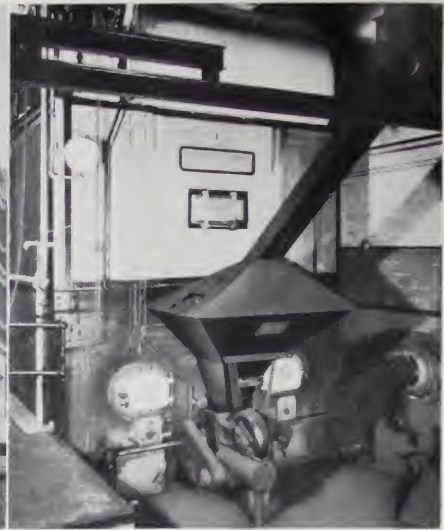
● St. Benedict's School, Highland Park, Mich., says:

"Since installing Detroit LoStokers we now burn nut, pea and slack. Our saving averages \$1.25 a ton delivered. We burn four hundred tons, average, a year. The direct fuel saving is \$500 a year. We also burn less coal. Heating is more uniform due to the automatic operation. Our janitors now spend a great deal of time on work about the buildings, thus saving labor."





Wentworth Technical Schools, Hamilton, Ont.  
Bernard H. and Fred Prack, Architects & Consulting Engineers, Hamilton



One of Two New Detroit Stoker Fired Boilers

## **Coal cost reduced \$2093 with heating load increased 65%**

● When the building shown above was added to the group which included the Technical School and the Ontario Training College (Hamilton, Ontario), the heating load was increased approximately 65%. But the coal cost was not correspondingly increased—as a matter of fact, it was reduced \$2,093 (from \$7,251 for the 1931-2 heating season to \$5,158

for the 1932-33 season).

This substantial saving in the face of a great load increase was made possible by the installation of Detroit Stokers with two new 250 horsepower boilers at the time the new building was added. These replaced four hand fired boilers, which were removed to make room for the new equipment.



## **37½% Fuel Saving at Stillwater (Minn.)**



Stillwater High School, Stillwater, Minn.  
Rose & Harris, Consulting Engineers, Minneapolis

## **High School**

● For the three heating seasons prior to the installation of a Detroit LoStoker, the average fuel bill for the Stillwater (Minn.) High School was \$4,016.28. During the first heating season when the LoStoker was used, the coal cost was only \$2,509.92—a saving of 37½% from the average of the previous three years.



## School Enlarged 60% with coal consumption reduced by 100 tons



South High School, Youngstown, Ohio

● When enlarging South High School (Board of Education), Youngstown, Ohio, 42,000 square feet of floor space were added—a 60% increase in heating demand. One Detroit Single Retort Stoker was installed so that present boiler equipment could take care of the requirements. In spite of the increased load, there

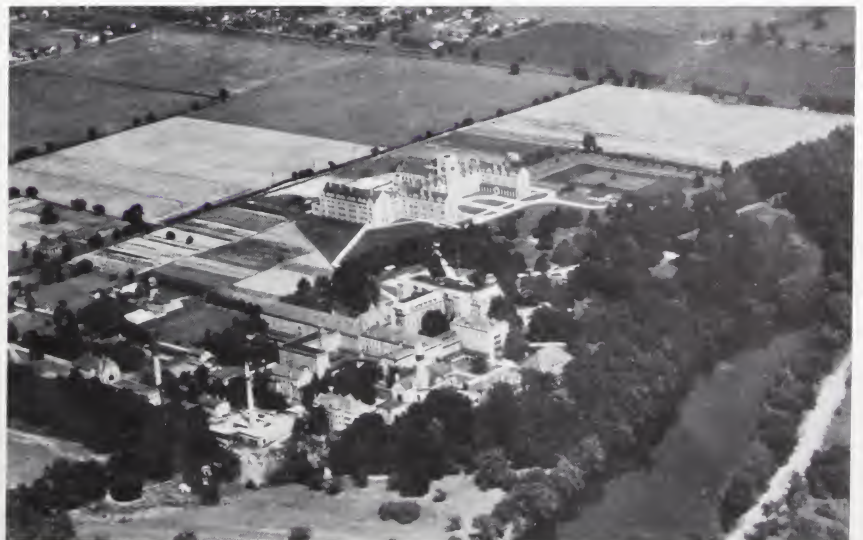
was a reduction in coal consumption of approximately 100 tons yearly.

This saving and the satisfactory performance of Detroit Stokers in other Youngstown schools, resulted in the installation of a total of eighteen Detroit Stokers in ten Youngstown schools.



## Estimate 20% Return on Investment in Plant Modernization

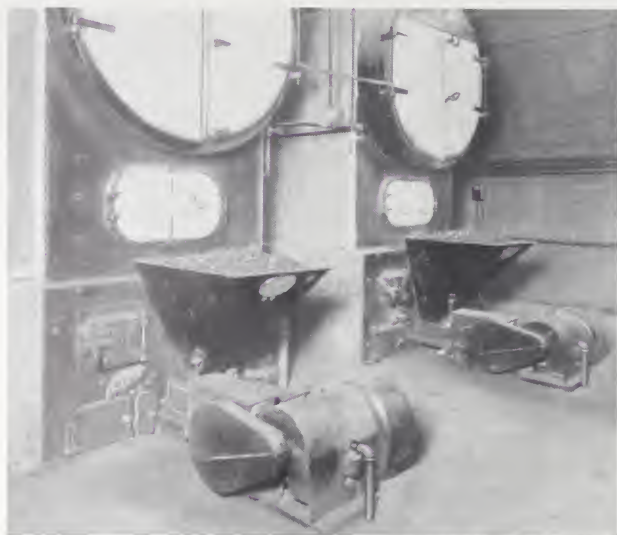
● Mr. T. H. Bowland, Chief Engineer, St. Mary's College and Academy, Notre Dame, Indiana, writes: "Installation of three new stoker fired boilers and auxiliaries . . . have not only produced excellent savings but have assured continuous, dependable service for a long time to come. Conservative estimates indicate that savings will pay for all improvements in about five years."



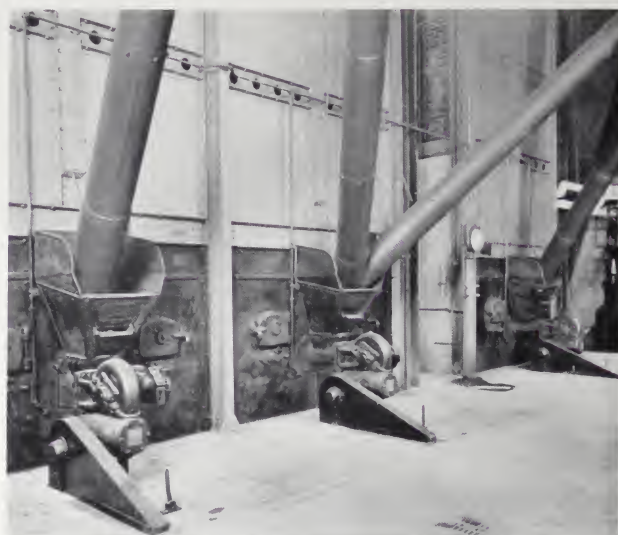
St. Mary's College & Academy, Notre Dame, Ind.  
C. C. Wilcox, Consulting Engineer, South Bend



# Proper Application



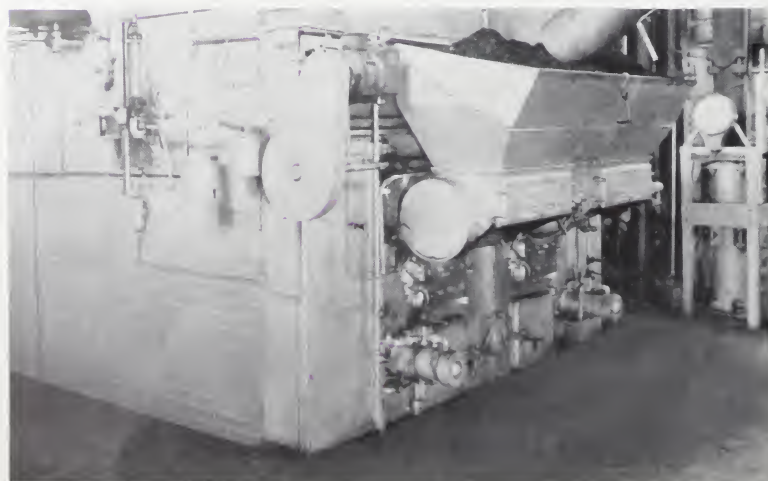
**DETROIT LOSTOKERS with FIREBOX BOILERS**  
Cathedral Latin High School, Cleveland, Ohio  
*William Koehl, Architect, Cleveland*  
*H. M. Nobis, Consulting Engineer, Cleveland*



**DETROIT SINGLE RETORT STOKERS with WATER TUBE BOILERS**  
Marygrove College, Detroit, Mich.  
*D. A. Bohlen & Sons, Architects, Indianapolis*  
*S. E. Fenstermaker & Co., Consulting Engineers, Indianapolis*



**DETROIT UNISTOKERS with FIREBOX BOILERS**  
Shorewood High School, Shorewood, Wis.  
*Herbst & Kuenzli, Architects & Engineers, Milwaukee*



**ONE OF TWO DETROIT ROTOSTOKERS with WATER TUBE BOILERS**  
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**Economically applied  
to all types and sizes  
of boilers. Readily  
installed with boilers  
already in service**



**DETROIT LOSTOKER with CAST IRON BOILER**  
Thayer School, Dearborn, Mich.

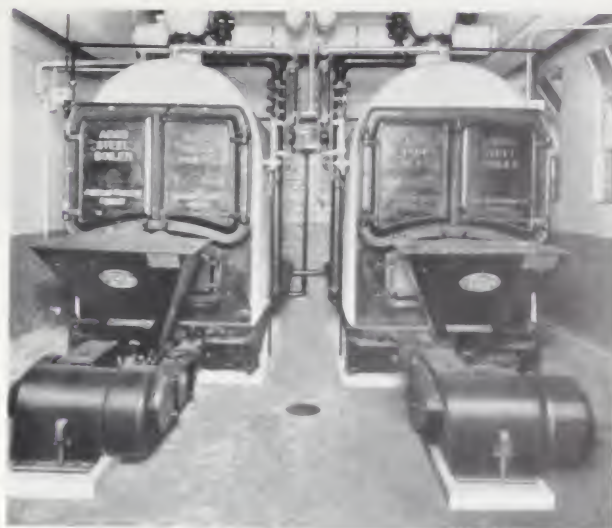


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## For All Boilers



DETROIT SINGLE RETORT STOKERS with WATER TUBE BOILERS  
Geo. Washington Junior High School, New Castle, Pa.  
*The Thayer Company, Architects, New Castle*



DETROIT LOSTOKERS with FIREBOX BOILERS  
Public School No. 74, Baltimore, Md.  
*Reeder, Eiser & Akers, Consulting Engineers, Baltimore*

**Detroit Stokers offer many features of design that provide an unequalled measure of value**



DETROIT DOUBLE RETORT STOKERS with WATER TUBE BOILERS  
St. Mary's College and Academy, Maumee, Mich.  
*D. A. Bohlen & Sons, Architects, Indianapolis*  
*S. E. Fenstermaker & Co., Consulting Engineers, Indianapolis*



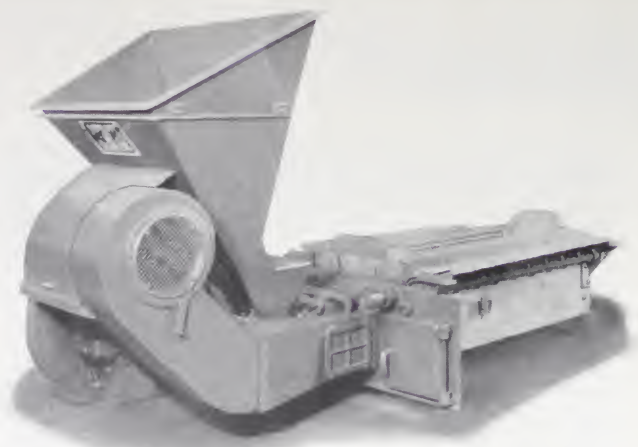
DETROIT UNISTOKERS with WATER TUBE BOILERS  
Von Steuben High School, Chicago, Ill.  
*John C. Christenson, Archt., Bd. of Ed., Chicago*  
*John Howatt, Eng., Bd. of Ed., Chicago*



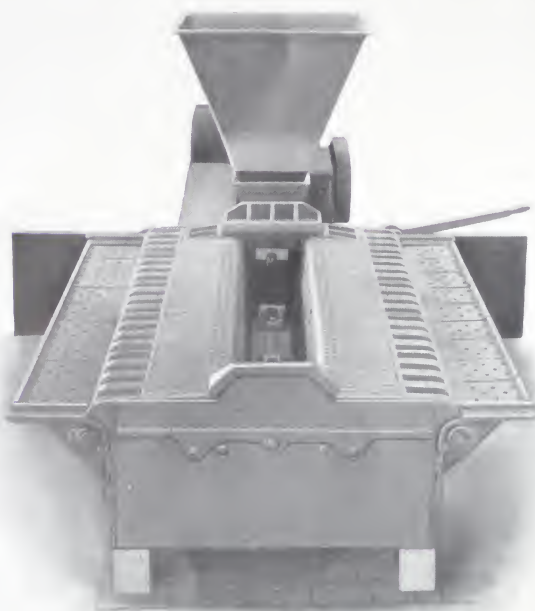
DETROIT MULTIPLE RETORT STOKERS with WATER TUBE BOILERS  
Catholic University of America, Washington, D. C.  
*Stone & Webster, Consulting Engineers, New York*

**DETROIT STOKERS BURN LESS EXPENSIVE COAL**





Detroit LoStoker, dependable, plunger feed side cleaning type. Agitator in the large coal hopper assures a continual flow of fuel to the plunger.



Detroit LoStoker (rear view) is built in various widths and lengths to fit the furnace. A large active grate area is provided.



Detroit LoStoker with a Firebox boiler. Coal hopper is designed to clear the boiler fire doors for access to the furnace. Ashes removed through doors shown in the stoker front.

# Simple Operation of Detroit Stokers

## All the Steam You Want When You Want It

● Consider the advantages of uniform boiler operation with Detroit Stokers. Plunger feed is the most positive and dependable method. Coal is fed only when needed and in the quantity required. A large active grate area, with air supplied to all points of fuel bed is provided. Positive control of fuel movement and ashes to the dumping grates at the side of the furnace assures high operating efficiency at all ratings. Side cleaning—a simple turn of the dumping lever deposits the ashes into ash pit for cooling before convenient removal through doors provided in the Stoker front.

Detroit Stokers are flexible in operation. Quick demands for steam are easily met. Boilers can be taken from a banked condition to full rating in a few minutes without smoke. Fire can be banked with minimum amount of coal. The fireman is often free to attend to other duties, thus saving labor.

Detroit Stokers may be driven by either electric motor, steam turbine or engine. Little power is required for operation. They can be automatically controlled from steam pressure, water temperature or room temperature.

Detroit Stokers are built in various types and many sizes—including both Underfeed and Overfeed Stokers to serve boilers from approximately 30 horsepower and upwards. Bituminous coals, obtainable in all sections, are successfully burned.

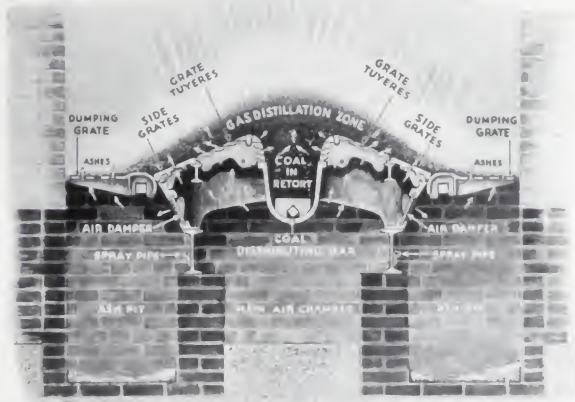
Complete catalogs are available describing the many features, embodied in the various designs which represent over thirty-five years experience in Stoker manufacture exclusively.



# Plunger Feed Assures Dependable and Accurate Control of the Fuel Bed

● Detroit UniStoker is self contained—Each boiler and Stoker is a combined unit. Is conveniently installed in small boiler rooms where space is limited.

Detroit UniStoker is mechanically driven by two sets of machine cut worms and gears, fully enclosed, running in oil. Simplicity of design permits of heavy construction for continual hard service.



Detroit UniStoker.

● Detroit UniStoker is built in many sizes and capacities to fit the furnace. Just the proper amount of grate surface is provided to handle the heavy loads and yet operate efficiently with light loads. The fuel bed is all active as every portion of the grate surface is penetrated by an infinite number of air streams.

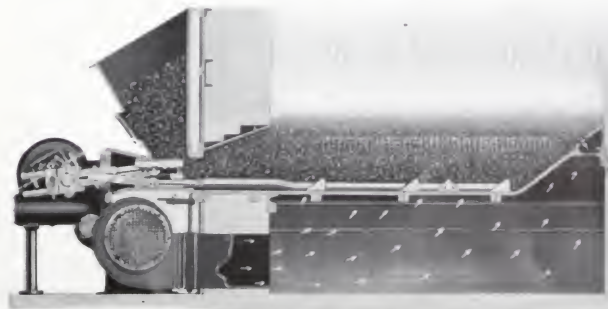


Detroit Multiple Retort Stoker (side view).



Detroit UniStoker.

● The Detroit UniStoker is provided with adjustments of fuel feed and distribution that may be made while the Stoker is operating. Arrows indicate flow of air from the full housed blower, mounted at the stoker front in proportion to the fuel, supplied to insure complete combustion on all boiler loads. The slicing action of the distribution bar makes the stoker continually self-cleaning.



Detroit UniStoker (side view).

● Although Detroit Multiple Retort Stokers are for large boilers and permit high ratings, they also operate efficiently under moderate load conditions. This is due to the unique design which combines an inclined fuel bed with horizontal retorts. Independent control of the quantity of coal supplied and the distribution for each retort is provided.





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*Tenney & Ohmes, Consulting Engineers, New York*

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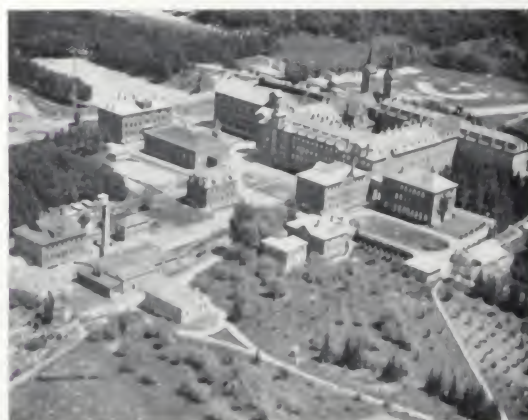
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Duns Scotus College  
 Wilfrid Edwards Anthony, Architect, New York  
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reduce your cost of  
producing steam



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1898

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● DETROIT STOKERS are a product of over thirty-five years of experience in stoker design, manufacture and application. They are built completely in the Company's own Works at Monroe, Michigan, comprising nine acres devoted to stoker manufacture exclusively. Materials of the highest quality are used. All castings are made of a special mixture of iron in our own modern foundry. Machining operations in well equipped Shops are carried on within the close tolerances of modern practice.

All prospective installations are analyzed from an engineering standpoint and the correctly proportioned stoker is recommended for the individual requirements of a plant. It is the policy of this Company to sell, install and service its own equipment through its own Organization.

DETROIT STOKERS are installed under the supervision of the Company's own erection superintendents, and frequent visits are made by the members of our Service Department for the purpose of instructing new Operators and to make certain that the equipment is operating at its highest efficiency.

The concentration of thought, effort and resources of a large organization, in the production of a single product—STOKERS—has resulted in a perfection of design and manufacture, of outstanding value to the Users of DETROIT STOKER equipment.

Information regarding DETROIT STOKERS is available to Architects, Engineers and Educational Executives everywhere. District Offices are located in Principal Cities, where our Engineers are available to study requirements.

There is a type and size of DETROIT STOKER for every service. Separate catalogs describing each type are available upon request.



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